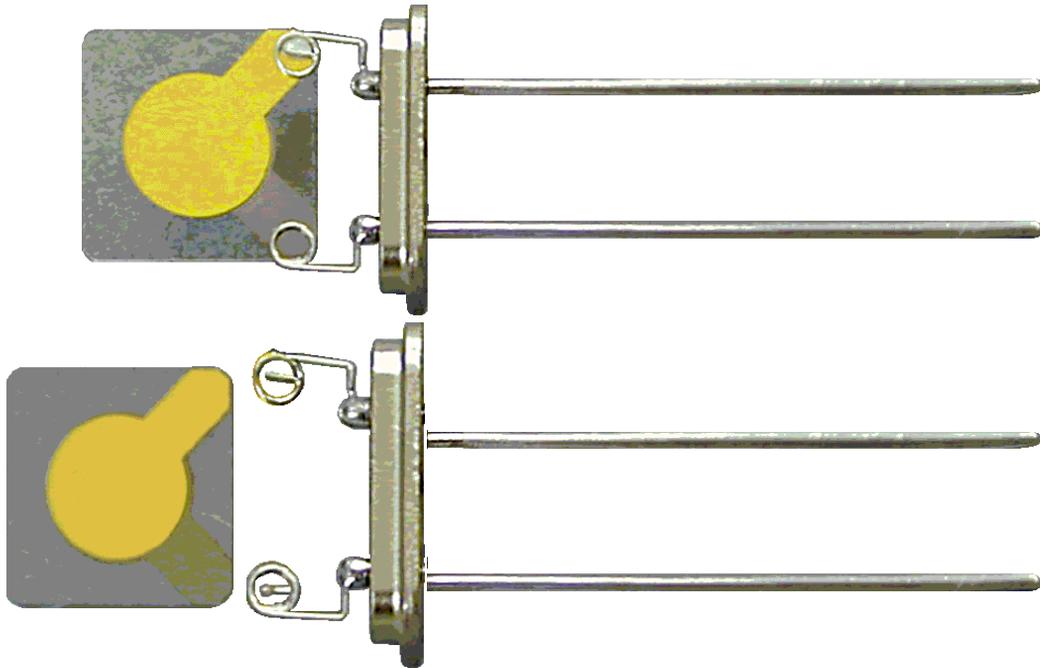




QA series Quartz Crystal Resonators are the sensor for QCM922A, QCM934, QCA922 and QCA917



Upper:QA-A9M-AU Lower:QA-A9M-AU(SEP)

Features of electrode materials, surface finish, lead wire fixing and quality

- Resonators with wide variety of electrode material as a standard

There are many options available for AT-cut resonator design with different electrode materials (Au, Pt, Al, C, Cu, Ni, Mo, ITO, Si, SiO₂, SUS316L, SUS304, Ti).

- 2 types surface finish and 2 types lead wire fixing

- Standard finish(=etching finish)

Usage: Polymer film and large mass detection for its large surface area with about 0.6 μ m surface roughness

- Mirror finish(=polish finish)

Usage: The surface of sample is observed after measurement and exact surface area for its surface roughness is about 0.06 μ m.

- Integrate lead wire fixing easily connects to the cell by removing the temporary fixing of cans.

● Separate lead wire fixing is used for cleaning the resonator before the measurement, pretreatment and surface observation before/after measurement. But it is necessary to fix crystal piece to lead wire before the measurement.

- Quantity from 25 pieces Quantity 25(standard and Mirror finish), 30 and 100(etching and polish finish)

Model

Model of resonator is base of QA-AnM-X , added surface finish, lead wire fixing and pieces.

Note: Standard finish and Integral is omitted (no description).

- Resonance frequency n: 9 if 9MHz and 30 if 30MHz
- Electrode materials X: AU if gold, PT if platinum, C if carbon, etc
- Surface finish: (M) if mirror, (E) if etching, (P) if polish
- Lead wire fixing: (SEP) if separate
- Pieces: N

Example: QA-A9M-AU(M)(SEP)-25: 9 MHz, AT-cut, Au, mirror finish, separate, 25pieces

| Lead wire fixing | | Surface finish | |
|-------------------|---|-------------------------------|----------------------------------|
| | | Standard and etching | Mirror and polish |
| Surface roughness | | Approx. 0.6µm | Approx. 0.06µm |
| Integral | Fix crystal piece and lead wire with Ag paste. Temporarily fixed in cans | QA-AnM-X-N/ QA-A9M-AU(E)-N | QA-AnM-X(M)-N/ QA-A9M-AU(P)-N |
| Separate | Separately packing the same number of crystal piece and lead wire. | QA-AnM-X(SEP)-N | QA-AnM-X(M)(SEP)-N |

Specification

AT-Cut Quartz Crystal Resonator

| Item | Description |
|-------------------------------------|--|
| Resonance frequency | 5MHz/ 9MHz/ 20MHz/ 30MHz |
| Cut | AT-cut |
| Electrode materials | Au, Pt, Ag, Al, C, Cu, ITO, Mo, Ni, Si, SiO ₂ , SUS304, Ti |
| Thickness | 300nm of electrode material is sputtered onto a Ti 100nm film groundwork(*) |
| Electrode area | 5mmφ |
| Size | Rectangular 7.9 x 7.9 mm (49U) integral and separate |
| Surface finish | Standard and etching finish: No.4000 polishing finish Mirror and polish finish: mirror polishing finish |
| Operation environmental temperature | -20°C to 70°C(non-condensing) |

* The electrode material ITO is not sputtered by Ti film as groundwork for transparency

* The electrode material SiO₂ is sputtered by Ti and Au film as groundwork

The specification is subject to change without notice. Please be forewarned.

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